Concept-Author-Title INDEX

VOLUME 24, NUMBERS 1-6, 1985

A

Ablation Process—In-Situ Recovery from the Athabasca Oil Sands—Past Experience and Future Potential, by D.A. Redford, Vol. 24, No. 3, P52-62, May-June 85.

Adams, D.M.—Effective Well Testing is the Key to Planning of Major New Developments Particularly in Remote Areas and Offshore Operations, by R.M. Pearson and D.M. Adams, Vol. 24, No. 4, P30-35, July-Aug. 85.

Allardyce, B.—Risk Analysis as a Project Tool, by B. Allardyce and G.M. Pottinger, Vol. 24, No. 2, P54-59, Mar.-Apr. 85.

Alloy Composition—Materials Performance in Thermal Enhanced Oil Recovery Environments, by R. Zawierucha and C.J. Henningson, Vol. 24, No. 3, P75-79, May-June 85.

Approximations—Simulation of Enhanced Recovery Projects—the Problems and the Pitfalls of the Current Solutions, by A. Settari and B. Karcher, Vol. 24, No. 6, P22-28, Nov.-Dec. 85.

Artificial Islands—Artificial Island Construction in an Arctic River—the Norman Wells Production Islands, by J.S. Hunter and R.M. Tibbatts, Vol. 24, No. 5, P32-36, Sept.-Oct. 85.

Athabasca Oil Sands—Recovery of Athabasca Bitumen with the Electromagnetic Flood (EMF) Process, by R.G. McPherson, F.S. Chute and F.E. Vermeulen, Vol. 24, No. 1, P44-51, Jan.-Feb. 85.

B

Beaufort Sea—A Practical Drill-Stem Testing Technique, Combining High Shop Density Underbalanced Perforating with Full Bore Test Tools, by J.B. Lukey, Vol. 24, No. 4, P36-43, July-Aug. 85.

Bennion, D.W.—Effect of Relative Permeability on the Numerical Simulation of the Steam Stimulation Process, by D.W. Bennion, R.G. Moore and F.B. Thomas, Vol. 24, No. 2, P40-44, Mar.-Apr. 85.

—Kinetic Parameters for the High-Temperature Oxidation of In-Situ Combustion Coke, by F.B. Thomas, R.G. Moore and D.W. Bennion, Vol. 24, No. 6, P60-67, Nov.-Dec. 85.

Bitumen—Simulation of a Large Steam-CO_2 Co-injection Experiment, by T. Stone and J.D. Malcolm, Vol. 24, No. 6. P51-59, Nov.-Dec. 85.

Boutette, M.J.—Enhanced Oil Recovery Design for the Pembina Cardium Field, by J.J. O'Keefe, M.J. Boutette and B.J. Howes, Vol. 24, No. 1, P52-60, Jan.-Feb. 85.

Breakthrough Times—A First-look Method for Analyzing Mature Waterfloods, by R. Krasey, Vol. 24, No. 6, P68-76, Nov.-Dec. 85.

Butler, R.M.—A New Approach to the Modelling of Steam-assisted Gravity Drainage, by R.M. Butler, Vol. 24, No. 3, P42-51, May-June 85.

C

Cahoon, A.R.—Effective Human Resource Management Under Restraint, by A.R. Cahoon and J.I.A. Rowney, Vol. 24, No. 2, P63-65, Mar.-Apr. 85.

Calibration—Application of Measurement while Drilling in a Shallow, Highly Deviated Drilling Program, by C.Z. Johancsik, A.E. Leraand, B.G. Petovello, D.A. Gust and B.W. Smith, Vol. 24, No. 5, P37-42, Sept.-Oct. 85.

Carbon Dioxide—Carbon Dioxide for Enhanced Oil Recovery in Canada, by S. McDonald, F. Mandybura and N. Sparks, Vol. 24, No. 1, P66-70, Jan.-Feb. 85.

—Carbon Dioxide/Aqueous Mixtures as Fracturing Fluids in Western Canada, by A.G. Leinan and P.C. Harris, Vol. 24, No. 2, P45-48, Mar.-Apr. 85.

Carbon Dioxide Flooding—Tertiary Recovery Potential of CO_2 Flooding in Joffre Viking Pool, Alberta, by S.C.M. Ko, P.M. Stanton and D.J. Stephenson, Vol. 24, No. 1, P36-43, Jan.-Feb. 85.

—Retlaw Upper Mannville 'V' Pool Unit Experimental Carbon Dioxide Flood, by W.E. Kerr, Vol. 24, No. 1, P64-65, Jan.-Feb. 85.

Carbon Dioxide Injection—Simulation of Enhanced Recovery Projects—the Problems and the Pitfalls of the Current Solutions, by A. Settari and B. Karcher, Vol. 24, No. 6, P22-28, Nov.-Dec. 85.

Career Development—Career Development and the Petroleum Industry, by C.F. Lamb and H.S. Dugan, Vol. 24, No. 6, P77-81, Nov.-Dec. 85.

Casing—Casing Running Considerations in Highly Deviated Wellbores, by R.O. Jordan, Vol. 24, No. 5, P43-48, Sept.-Oct. 85.

Cementing—Casing Running Considerations in Highly Deviated Wellbores, by R.O. Jordan, Vol. 24, No. 5, P43-48, Sept.-Oct. 85.

—Application of Foam Cements in Alberta, by M.T. Olanson, Vol. 24, No. 5, P49-57, Sept.-Oct. 85.

Chatzis, T.—Corrections to In-Situ Measurements of Residual Oil for Flushing at the Wellbore, by N.R. Morrow, I. Chatzis, D. Siegel and J.J. Taber, Vol. 24, No. 4, P54-61, July-Aug. 85.

—Relative Permeabilities at Reduced Residual Saturations, by N.R. Morrow, I. Chatzis and H. Lim, Vol. 24, No. 4, P62-69, July-Aug. 85.

Chen, G.C.—A Technique for the Measurement of Dynamic Mechanical Properties of Oil Sands, by T.R. Hsu, G.G. Chen and Z.L. Gong, Vol. 24, No. 3, P63-68, May-June 85.

Chromatography—Thermal Extraction Chromatography—a New Technique for Rapid Wellbore Evaluation, by J.G.W. Price, Vol. 24, No. 5, P64-69, Sept.-Oct. 85.

Chute, F.S.—Recovery of Athabasca Bitumen with the Electromagnetic Flood (EMF) Process, by R.G. McPherson, F.S. Chute and F.E. Vermeulen, Vol. 24, No. 1, P44-51, Jan.-Feb. 85.

Clademenos, A.—Futures: An Added Dimension to Trading Oil and Gas Stocks, by A. Clademenos, Vol. 24, No. 2, P60-62, Mar.-Apr. 85.

Coke Combustion—Kinetic Parameters for the High-Temperature Oxidation of In-Situ Combustion Coke, by F.B. Thomas, R.G. Moore and D.W. Bennion, Vol. 24, No. 6, P60-67, Nov.-Dec. 85.

Coking—Kinetic Parameters for the High-Temperature Oxidation of In-Situ Combustion Coke, by F.B. Thomas, R.G. Moore and D.W. Bennion, Vol. 24, No. 6, P60-67, Nov.-Dec. 85.

Completions—Application of Foam Cements in Alberta, by M.T. Olanson, Vol. 24, No. 5, P49-57, Sept.-Oct. 85.

—Cementing Steamflood and Fireflood Wells—Slurry Design, by E.B. Nelson and L.H. Eilers, Vol. 24, No. 5, P58-63, Sept.-Oct. 85.

—Thermal Extraction Chromatography—a New Technique for Rapid Wellbore Evaluation, by J.G.W. Price, Vol. 24, No. 5, P64-69, Sept.-Oct. 85.

Compositional Simulation—Phase Behaviour Computations for Reservoir Fluids: Effect of Pseudo-components on Phase Dia-

grams and Simulation Results, by Yau-Kun Li, Long X. Nghiem and Alan Siu, Vol. 24, No. 6, P29-36, Nov.-Dec. 85.

Computers—Phase Behaviour Computations for Reservoir Fluids: Effect of Pseudo-components on Phase Diagrams and Simulation Results, by Yau-Kun Li, Long X. Nghiem and Alan Siu, Vol. 24, No. 6, P29-36, Nov.-Dec. 85.

—Simulation of a Large Steam-CO_2 Co-injection Experiment, by T. Stone and J.D. Malcolm, Vol. 24, No. 6, P51-59, Nov.-Dec. 85.

Construction—Artificial Island Construction in an Arctic River—the Norman Wells Production Islands, by J.S. Hunter and R.M. Tibbatts, Vol. 24, No. 5, P32-36, Sept.-Oct. 85.

Corrosion—Materials Performance in Thermal Enhanced Oil Recovery Environments, by R. Zawierucha and C.J. Henningson, Vol. 24, No. 3, P75-79, May-June 85.

Cost—Effective Well Testing is the Key to Planning of Major New Developments Particularly in Remote Areas and Offshore Operations, by R.M. Pearson and D.M. Adams, Vol. 24, No. 4, P30-35, July-Aug. 85.

—Application of Measurement while Drilling in a Shallow, Highly Deviated Drilling Program, by C.Z. Johancsik, A.E. Leraand, B.G. Petovello, D.A. Gust and B.W. Smith, Vol. 24, No. 5, P37-42, Sept.-Oct. 85.

Critical Properties—Phase Behaviour Computations for Reservoir Fluids: Effect of Pseudo-components on Phase Diagrams and Simulation Results, by Yau-Kun Li, Long X. Nghiem and Alan Siu, Vol. 24, No. 6, P29-36, Nov.-Dec. 85.

Crude Oil—Research into Enhanced Oil Recovery Technologies, by E.O. Egbogah, Vol. 24, No. 1, P71-72, Jan.-Feb. 85.

—Effect of Relative Permeability on the Numerical Simulation of the Steam Stimulation Process, by D.W. Bennion, R.G. Moore and F.B. Thomas, Vol. 24, No. 2, P40-44, Mar.-Apr. 85.

Czyzewski, G.—Production Evaluation of the Viking Kinsella B Pool Unit No. 1, by J.J. Edgson and G. Czyzewski, Vol. 24, No. 4, P70-76, July-Aug. 85.

D

Decline-curve Analysis—Analysis of Production-Performance Graphs, by R.A. Purvis, Vol. 24, No. 4, P44-53, July-Aug. 85.

Design—Artificial Island Construction in an Arctic River—the Norman Wells Production Islands, by J.S. Hunter and R.M. Tibbatts, Vol. 24, No. 5, P32-36, Sept.-Oct. 85.

Development—Artificial Island Construction in an Arctic River—the Norman Wells Production Islands, by J.S. Hunter and R.M. Tibbatts, Vol. 24, No. 5, P32-36, Sept.-Oct. 85.

Development Planning—Effective Well Testing is the Key to Planning of Major New Developments Particularly in Remote Areas and Offshore Operations, by R.M. Pearson and D.M. Adams, Vol. 24, No. 4, P30-35, July-Aug. 85.

Differential Analysis—Kinetic Parameters for the High-Temperature Oxidation of In-Situ Combustion Coke, by F.B. Thomas, R.G. Moore and D.W. Bennion, Vol. 24, No. 6, P60-67, Nov.-Dec. 85.

Diffusion—Reservoir Model Studies for Miscible Flood Projects, by J. Flores, A. Siu and Yau-Kun Li, Vol. 24, No. 6, P37-50, Nov.-Dec. 85.

Dispersion—Reservoir Model Studies for Miscible Flood Projects, by J. Flores, A. Siu and Yau-Kun Li, Vol. 24, No. 6, P37-50, Nov.-Dec. 85.

—Kinetic Parameters for the High-Temperature Oxidation of In-Situ Combustion Coke, by F.B. Thomas, R.G. Moore and D.W. Bennion, Vol. 24, No. 6, P60-67, Nov.-Dec. 85.

Drilling—Enhanced Oil Recovery Design for the Pembina Cardium Field, by J.J. O'Keefe, M.J. Boutette and B.J. Howes, Vol. 24, No. 1, P52-60, Jan.-Feb. 85.

—Effective Well Testing is the Key to Planning of Major New Developments Particularly in Remote Areas and Offshore Operations, by R.M. Pearson and D.M. Adams, Vol. 24, No. 4, P30-35, July-Aug. 85.

—A Practical Drill-stem Testing Technique, Combining High Shop Density Underbalanced Perforating with Full Bore Test Toois, by J.B. Lukey, Vol. 24, No. 4, P36-43, July-Aug. 85.

—Analysis of Production-Performance Graphs, by R.A. Purvis, Vol. 24, No. 4, P44-53, July-Aug. 85.

—Corrections to In-Situ Measurements of Residual Oil for Flushing at the Wellbore, by N.R. Morrow, I. Chatzis, D. Siegel and J.J. Taber, Vol. 24, No. 4, P54-61, July-Aug. 85.

—Technical and Economic Evaluation of Ship-shaped Floating Production and Storage Systems for the Canadian East Coast Offshore, by J.K. Peggs, K. Hutton and R. Rainey, Vol. 24, No. 5, P24-31, Sept.-Oct. 85.

—Artificial Island Construction in an Arctic River—the Norman Wells Production Islands, by J.S. Hunter and R.M. Tibbatts, Vol. 24, No. 5, P32-36, Sept.-Oct. 85.

—Application of Measurement while Drilling in a Shallow, Highly Deviated Drilling Program, by C.Z. Johancsik, A.E. Leraand, B.G. Petovello, D.A. Gust and B.W. Smith, Vol. 24, No. 5, P37-42, Sept.-Oct. 85.

—Casing Running Considerations in Highly Deviated Wellbores, by R.O. Jordan, Vol. 24, No. 5, P43-48, Sept.-Oct. 85.

—Application of Foam Cements in Alberta, by M.T. Olanson, Vol. 24, No. 5, P49-57, Sept.-Oct. 85.

—Cementing Steamflood and Fireflood Wells—Slurry Design, by E.B. Nelson and L.H. Eilers, Vol. 24, No. 5, P58-63, Sept.-Oct. 85.

—Thermal Extraction Chromatography—a New Technique for Rapid Wellbore Evaluation, by J.G.W. Price, Vol. 24, No. 5, P64-69, Sept.-Oct. 85.

Drill-stem Test—A Practical Drill-stem Testing Technique, Combining High Shop Density Underbalanced Perforating with Full Bore Test Tools, by J.B. Lukey, Vol. 24, No. 4, P36-43, July-Aug. 85.

Dugan, H.S.—Career Development and the Petroleum Industry, by C.F. Lamb and H.S. Dugan, Vol. 24, No. 6, P77-81, Nov.-Dec. 85.

Dynamic Implicit Method—Fully Implicit Versus Dynamic Implicit Reservoir Simulation, by P.K.W. Vinsome, Vol. 24, No. 2, P49-53, Mar.-Apr. 85.

Dynamic Mechanical Properties—A Technique for the Measurement of Dynamic Mechanical Properties of Oil Sands, by T.R. Hsu, G.G. Chen and Z.L. Gong, Vol. 24, No. 3, P63-68, May-June 85.

Dynamic Positioning System—Technical and Economic Evaluation of Ship-shaped Floating Production and Storage Systems for the Canadian East Coast Offshore, by J.K. Peggs, K. Hutton and R. Rainey, Vol. 24, No. 5, P24-31, Sept.-Oct. 85.

E

Economic Evaluation—Technical and Economic Evaluation of Ship-shaped Floating Production and Storage Systems for the Canadian East Coast Offshore, by J.K. Peggs, K. Hutton and R. Rainey, Vol. 24, No. 5, P24-31, Sept.-Oct. 85.

Edgson, J.J.—Production Evaluation of the Viking Kinsella B Pool Unit No. 1, by J.J. Edgson and G. Czyzewski, Vol. 24, No. 4, P70-76, July-Aug. 85.

Egbogah, E.O.—Research into Enhanced Oil Recovery Technologies, by E.O. Egbogah, Vol. 24, No. 1, P71-72, Jan.-Feb. 85.

Eigenvalue-eigenvector—Kinetic Parameters for the High-Temperature Oxidation of In-Situ Combustion Coke, by F.B. Thomas, R.G. Moore and D.W. Bennion, Vol. 24, No. 6, P60-67, Nov.-Dec. 85.

Eilers, L.H.—Cementing Steamflood and Fireflood Wells—Slurry Design, by E.B. Nelson and L.H. Eilers, Vol. 24, No. 5, P58-63, Sept.-Oct. 85.

Electromagnetic Flood Process—Recovery of Athabasca Bitumen with the Electromagnetic Flood (EMF) Process, by R.G. McPherson, F.S. Chute and F.E. Vermeulen, Vol. 24, No. 1, P44-51, Jan.-Feb. 85.

Engineering—Phase Behaviour Computations for Reservoir Fluids: Effect of Pseudo-components on Phase Diagrams and Simulation Results, by Yau-Kun Li, Long X. Nghiem and Alan Siu, Vol. 24, No. 6, P29-36, Nov.-Dec. 85.

Enhanced Oil Recovery—Tertiary Recovery Potential of CO_2 Flooding in Joffre Viking Pool, Alberta, by S.C.M. Ko, P.M. Stanton and D.J. Stephenson, Vol. 24, No. 1, P36-43, Jan.-Feb. 85.

—Recovery of Athabasca Bitumen with the Electromagnetic Flood (EMF) Process, by R.G. McPherson, F.S. Chute and F.E. Vermeulen, Vol. 24, No. 1, P44-51, Jan.-Feb. 85.

—Enhanced Oil Recovery Design for the Pembina Cardium Field, by J.J. O'Keefe, M.J. Boutette and B.J. Howes, Vol. 24, No. 1, P52-60, Jan.-Feb. 85.

—Enhanced Oil Recovery: Retrospect and Prospect, by G.C. Watkins and K. Chant Sharp, Vol. 24, No. 1, P61-63, Jan.-Feb. 85.

—Retlaw Upper Mannville 'V' Pool Unit Experimental Carbon Dioxide Flood, by W.E. Kerr, Vol. 24, No. 1, P64-65, Jan.-Feb. 85.

—Carbon Dioxide for Enhanced Oil Recovery in Canada, by S. McDonald, F. Mandybura and N. Sparks, Vol. 24, No. 1, P66-70, Jan.-Feb. 85.

—Research into Enhanced Oil Recovery Technologies, by E.O. Egbogah, Vol. 24, No. 1, P71-72, Jan.-Feb. 85.

—Materials Performance in Thermal Enhanced Oil Recovery Environ-

ments, by R. Zawierucha and C.J. Henningson, Vol. 24, No. 3, P75-79, May-June 85.
—Problems in Numerical Simulation of Heavy Oil Reservoirs, by M.N. Esmail, Vol. 24, No. 3, P80-82, May-June 85.
—Relative Permeabilities at Reduced Residual Saturations, by N.R. Morrow, I. Chatzis and H. Lim, Vol. 24, No. 4, P62-69, July-Aug. 85.
—Simulation of Enhanced Recovery Projects—the Problems and the Pitfalls of the Current Solutions, by A. Settari and B. Karcher, Vol. 24, No. 6, P22-28, Nov.-Dec. 85.
—Reservoir Model Studies for Miscible Flood Projects, by J. Flores, A. Siu and Yau-Kun Li, Vol. 24, No. 6, P37-50, Nov.-Dec. 85.

Equipment—Application of Measurement while Drilling in a Shallow, Highly Deviated Drilling Program, by C.Z. Johancsik, A.E. Leraand, B.G. Petovello, D.A. Gust and B.W. Smith, Vol. 24, No. 5, P37-42, Sept.-Oct. 85.

Esmail, M.N.—Problems in Numerical Simulation of Heavy Oil Reservoirs, by M.N. Esmail, Vol. 24, No. 3, P80-82, May-June 85.

Exponential Decline—Analysis of Production-Performance Graphs, by R.A. Purvis, Vol. 24, No. 4, P44-53, July-Aug. 85.

F

Federal Energy Regulatory Commission—FERC's Notice of Proposed Rule-making, by W. Fruehauf, Vol. 24, No. 6, P82-84, Nov.-Dec. 85.

Fire Flooding—Materials Performance in Thermal Enhanced Oil Recovery Environments, by R. Zawierucha and C.J. Henningson, Vol. 24, No. 3, P75-79, May-June 85.
—Cementing Steamflood and Fireflood Wells—Slurry Design, by E.B. Nelson and L.H. Eilers, Vol. 24, No. 5, P58-63, Sept.-Oct. 85.

Floating Production Systems—Technical and Economic Evaluation of Ship-shaped Floating Production and Storage Systems for the Canadian East Coast Offshore, by J.K. Peggs, K. Hutton and R. Rainey, Vol. 24, No. 5, P24-31, Sept.-Oct. 85.

Flood Front Tracking—A First-look Method for Analyzing Mature Waterfloods, by R. Krasey, Vol. 24, No. 6, P68-76, Nov.-Dec. 85.

Flores, Jorge—Reservoir Model Studies for Miscible Flood Projects, by J. Flores, A. Siu and Yau-Kun Li, Vol. 24, No. 6, P37-50, Nov.-Dec. 85.

Fluid Recovery—Carbon Dioxide/Aqueous Mixtures as Fracturing Fluids in Western Canada, by A.G. Leinan and P.C. Harris, Vol. 24, No. 2, P45-48, Mar.-Apr. 85.

Fluid Viscosity—Casing Running Considerations in Highly Deviated Wellbores, by R.O. Jordan, Vol. 24, No. 5, P43-48, Sept.-Oct. 85.

Flushing—Corrections to In-Situ Measurements of Residual Oil for Flushing at the Wellbore, by N.R. Morrow, I. Chatzis, D. Siegel and J.J. Taber, Vol. 24, No. 4, P54-61, July-Aug. 85.

Foam Cements—Application of Foam Cements in Alberta, by M.T. Olanson, Vol. 24, No. 5, P49-57, Sept.-Oct. 85.
—Cementing Steamflood and Fireflood Wells—Slurry Design, by E.B. Nelson and L.H. Eilers, Vol. 24, No. 5, P58-63, Sept.-Oct. 85.

Formation—Application of Foam Cements in Alberta, by M.T. Olanson, Vol. 24, No. 5, P49-57, Sept.-Oct. 85.

Fracture Pressure—In-Situ Recovery from the Athabasca Oil Sands—Past Experience and Future Potential, by D.A. Redford, Vol. 24, No. 3, P52-62, May-June 85.

Fracturing—Carbon Dioxide/Aqueous Mixtures as Fracturing Fluids in Western Canada, by A.G. Leinan and P.C. Harris, Vol. 24, No. 2, P45-48, Mar.-Apr. 85.

Fracturing Fluids—Carbon Dioxide/Aqueous Mixtures as Fracturing Fluids in Western Canada, by A.G. Leinan and P.C. Harris, Vol. 24, No. 2, P45-48, Mar.-Apr. 85.

Fruehauf, W.—FERC's Notice of Proposed Rule-making, by W. Fruehauf, Vol. 24, No. 6, P82-84, Nov.-Dec. 85.

G

Gas Composition—Materials Performance in Thermal Enhanced Oil Recovery Environments, by R. Zawierucha and C.J. Henningson, Vol. 24, No. 3, P75-79, May-June 85.

Gas Condensate—Phase Behaviour Computations for Reservoir Fluids: Effect of Pseudo-components on Phase Diagrams and Simulation Results, by Yau-Kun Li, Long X. Nghiem and Alan Siu, Vol. 24, No. 6, P29-36, Nov.-Dec. 85.

Gas Stocks—Futures: An Added Dimension to Trading Oil and Gas Stocks, by A. Clademenos, Vol. 24, No. 2, P60-62, Mar.-Apr. 85.

Gearhart MWD System—Application of Measurement while Drilling in a Shallow, Highly Deviated Drilling Program, by C.Z. Johancsik, A.E. Leraand, B.G. Petovello, D.A. Gust and B.W. Smith, Vol. 24, No. 5, P37-42, Sept.-Oct. 85.

Gong, Z.L.—A Technique for the Measurement of Dynamic Mechanical Properties of Oil Sands, by T.R. Hsu, G.G. Chen and Z.L. Gong, Vol. 24, No. 3, P63-68, May-June 85.

Gravity Drainage—Recovery of Athabasca Bitumen with the Electromagnetic Flood (EMF) Process, by R.G. McPherson, F.S. Chute and F.E. Vermeulen, Vol. 24, No. 1, P44-51, Jan.-Feb. 85.
—A New Approach to the Modelling of Steam-Assisted Gravity Drainage, by R.M. Butler, Vol. 24, No. 3, P42-51, May-June 85.
—In-Situ Recovery from the Athabasca Oil Sands—Past Experience and Future Potential, by D.A. Redford, Vol. 24, No. 3, P52-62, May-June 85.

Gravity Override—Simulation of Enhanced Recovery Projects—the Problems and the Pitfalls of the Current Solutions, by A. Settari and B. Karcher, Vol. 24, No. 6, P22-28, Nov.-Dec. 85.

Grid Orientation—Simulation of Enhanced Recovery Projects—the Problems and the Pitfalls of the Current Solutions, by A. Settari and B. Karcher, Vol. 24, No. 6, P22-28, Nov.-Dec. 85.

Gust, D.A.—Application of Measurement while Drilling in a Shallow, Highly Deviated Drilling Program, by C.Z. Johancsik, A.E. Leraand, B.G. Petovello, D.A. Gust and B.W. Smith, Vol. 24, No. 5, P37-42, Sept.-Oct. 85.

H

Harmonic Decline—Analysis of Production-Performance Graphs, by R.A. Purvis, Vol. 24, No. 4, P44-53, July-Aug. 85.

Harris, P.—A Laboratory Investigation into the In-Situ Recovery of Bitumen from an Oil Sand Formation using Hot Water and Naphtha, by P. Harris, P. Toma and D. Livesey, Vol. 24, No. 3, P69-74, May-June 85.

Harris, P.C.—Carbon Dioxide/Aqueous Mixtures as Fracturing Fluids in Western Canada, by A.G. Leinan and P.C. Harris, Vol. 24, No. 2, P45-48, Mar.-Apr. 85.

HAS Drive—In-Situ Recovery from the Athabasca Oil Sands—Past Experience and Future Potential, by D.A. Redford, Vol. 24, No. 3, P52-62, May-June 85.

Heat Loss—Simulation of a Large Steam-CO_2 Co-injection Experiment, by T. Stone and J.D. Malcolm, Vol. 24, No. 6, P51-59, Nov.-Dec. 85.

Heavy Oil—Effect of Relative Permeability on the Numerical Simulation of the Steam Stimulation Process, by D.W. Bennion, R.G. Moore and F.B. Thomas, Vol. 24, No. 2, P40-44, Mar.-Apr. 85.
—A New Approach to the Modelling of Steam-Assisted Gravity Drainage, by R.M. Butler, Vol. 24, No. 3, P42-51, May-June 85.
—Problems in Numerical Simulation of Heavy Oil Reservoirs, by M.N. Esmail, Vol. 24, No. 3, P80-82, May-June 85.
—Heavy Oil Research in Saskatchewan, by J. Hutchinson, Vol. 24, No. 3, P83, May-June 85.

Helium—Helium—What about it?, by R.V. Welch, Vol. 24, No. 5, P69-70, Sept.-Oct. 85.

Henningson, C.J.—Materials Performance in Thermal Enhanced Oil Recovery Environments, by R. Zawierucha and C.J. Henningson, Vol. 24, No. 3, P75-79, May-June 85.

High-alumina Cement—Cementing Steamflood and Fireflood Wells—Slurry Design, by E.B. Nelson and L.H. Eilers, Vol. 24, No. 5, P58-63, Sept.-Oct. 85.

Hole Cleaning—Casing Running Considerations in Highly Deviated Wellbores, by R.O. Jordan, Vol. 24, No. 5, P43-48, Sept.-Oct. 85.

Hot Water - Naphtha Process—A Laboratory Investigation into the In-Situ Recovery of Bitumen from an Oil Sand Formation using Hot Water and Naphtha, by P. Harris, P. Toma and D. Livesey, Vol. 24, No. 3, P69-74, May-June 85.

Howes, B.J.—Enhanced Oil Recovery Design for the Pembina Cardium Field, by J.J. O'Keefe, M.J. Boutette and B.J. Howes, Vol. 24, No. 1, P52-60, Jan.-Feb. 85.

Hsu, T.R.—A Technique for the Measurement of Dynamic Mechanical Properties of Oil Sands, by T.R. Hsu, G.G. Chen and Z.L. Gong, Vol. 24, No. 3, P63-68, May-June 85.

Human Resources—Effective Human Resource Management Under Restraint, by A.R. Cahoon and J.I.A. Rowney, Vol. 24, No. 2, P63-65, Mar.-Apr. 85.

Hunter, J.S.—Artificial Island Construction in an Arctic River—the Norman Wells Production Islands, by J.S. Hunter and R.M. Tibbatts, Vol. 24, No. 5, P32-36, Sept.-Oct. 85.

Hutchinson, J.—Heavy Oil Research in Saskatchewan, by J. Hutchinson, Vol. 24, No. 3, P83, May-June 85.

Hutton, K.—Technical and Economic Evaluation of Ship-shaped Floating Production and Storage Systems for the Canadian East Coast Offshore, by J.K. Peggs, K. Hutton and R. Rainey, Vol. 24, No. 5, P24-31, Sept.-Oct. 85.

Hydrocarbons—Thermal Extraction Chromatography—a New Technique for Rapid Wellbore Evaluation, by J.G.W. Price, Vol. 24, No. 5, P64-69, Sept.-Oct. 85.

Hyperbolic Decline—Analysis of Production-Performance Graphs, by R.A. Purvis, Vol. 24, No. 4, P44-53, July-Aug. 85.

I

Infill Drilling—Reservoir Model Studies for Miscible Flood Projects, by J. Flores, A. Siu and Yau-Kun Li, Vol. 24, No. 6, P37-50, Nov.-Dec. 85.

In-Situ Recovery—In-Situ Recovery from the Athabasca Oil Sands—Past Experience and Future Potential, by D.A. Redford, Vol. 24, No. 3, P52-62, May-June 85.

—A Laboratory Investigation into the In-Situ Recovery of Bitumen from an Oil Sand Formation using Hot Water and Naphtha, by P. Harris, P. Toma and D. Livesey, Vol. 24, No. 3, P69-74, May-June 85.

Interfacial Tension—Carbon Dioxide/Aqueous Mixtures as Fracturing Fluids in Western Canada, by A.G. Leinan and P.C. Harris, Vol. 24, No. 2, P45-48, Mar.-Apr. 85.

—Relative Permeabilities at Reduced Residual Saturations, by N.R. Morrow, I. Chatzis and H. Lim, Vol. 24, No. 4, P62-69, July-Aug. 85.

J

Jacobian Equations—Fully Implicit Versus Dynamic Implicit Reservoir Simulation, by P.K.W. Vinsome, Vol. 24, No. 2, P49-53, Mar.-Apr. 85.

Joffre Viking Pool—Tertiary Recovery Potential of CO_2 Flooding in Joffre Viking Pool, Alberta, by S.C.M. Ko, P.M. Stanton and D.J. Stephenson, Vol. 24, No. 1, P36-43, Jan.-Feb. 85.

Johancsik, C.A.—Application of Measurement while Drilling in a Shallow, Highly Deviated Drilling Program, by C.Z. Johancsik, A.E. Leraand, B.G. Petovello, D.A. Gust and B.W. Smith, Vol. 24, No. 5, P37-42, Sept.-Oct. 85.

Jordan, R.D.—Casing Running Considerations in Highly Deviated Wellbores, by R.O. Jordan, Vol. 24, No. 5, P43-48, Sept.-Oct. 85.

K

Karcher, B.—Simulation of Enhanced Recovery Projects—the Problems and the Pitfalls of the Current Solutions, by A. Settari and B. Karcher, Vol. 24, No. 6, P22-28, Nov.-Dec. 85.

Kerr, W.E.—Retlaw Upper Mannville 'V' Pool Unit Experimental Carbon Dioxide Flood, by W.E. Kerr, Vol. 24, No. 1, P64-65, Jan.-Feb. 85.

Kinetic Parameters—Kinetic Parameters for the High-Temperature Oxidation of In-Situ Combustion Coke, by F.B. Thomas, R.G. Moore and D.W. Bennion, Vol. 24, No. 6, P60-67, Nov.-Dec. 85.

Ko, S.C.M.—Tertiary Recovery Potential of CO_2 Flooding in Joffre Viking Pool, Alberta, by S.C.M. Ko, P.M. Stanton and D.J. Stephenson, Vol. 24, No. 1, P36-43, Jan.-Feb. 85.

Krasey, R.—A First-look Method for Analyzing Mature Waterfloods, by R. Krasey, Vol. 24, No. 6, P68-76, Nov.-Dec. 85.

L

Lamb, C.F.—Career Development and the Petroleum Industry, by C.F. Lamb and H.S. Dugan, Vol. 24, No. 6, P77-81, Nov.-Dec. 85.

LDU Factorization—Fully Implicit Versus Dynamic Implicit Reservoir Simulation, by P.K.W. Vinsome, Vol. 24, No. 2, P49-53, Mar.-Apr. 85.

Leinan, A.B.—Carbon Dioxide/Aqueous Mixtures as Fracturing Fluids in Western Canada, by A.G. Leinan and P.C. Harris, Vol. 24, No. 2, P45-48, Mar.-Apr. 85.

Leraand, A.E.—Application of Measurement while Drilling in a Shallow, Highly Deviated Drilling Program, by C.Z. Johancsik, A.E. Leraand, B.G. Petovello, D.A. Gust and B.W. Smith, Vol. 24, No. 5, P37-42, Sept.-Oct. 85.

Li, Yau-Kun—Phase Behaviour Computations for Reservoir Fluids: Effect of Pseudo-components on Phase Diagrams and Simulation Results, by Yau-Kun Li, Long X. Nghiem and Alan Siu, Vol. 24, No. 6, P29-36, Nov.-Dec. 85.

—Reservoir Model Studies for Miscible Flood Projects, by J. Flores, A. Siu and Yau-Kun Li, Vol. 24, No. 6, P37-50, Nov.-Dec. 85.

Lim, H.—Relative Permeabilities at Reduced Residual Saturations, by N.R. Morrow, I. Chatzis and H. Lim, Vol. 24, No. 4, P62-69, July-Aug. 85.

Livesey, D.—A Laboratory Investigation into the In-Situ Recovery of Bitumen from an Oil Sand Formation using Hot Water and Naphtha, by P. Harris, P. Toma and D. Livesey, Vol. 24, No. 3, P69-74, May-June 85.

Loading Rates—A Technique for the Measurement of Dynamic Mechanical Properties of Oil Sands, by T.R. Hsu, G.G. Chen and Z.L. Gong, Vol. 24, No. 3, P63-68, May-June 85.

Logging—Corrections to In-Situ Measurements of Residual Oil for Flushing at the Wellbore, by N.R. Morrow, I. Chatzis, D. Siegel and J.J. Taber, Vol. 24, No. 4, P54-61, July-Aug. 85.

Lukey, J.B.—A Practical Drill-Stem Testing Technique, Combining High Shop Density Underbalanced Perforating with Full Bore Test Tools, by J.B. Lukey, Vol. 24, No. 36-43, July-Aug. 85.

Lumping Schemes—Phase Behaviour Computations for Reservoir Fluids: Effect of Pseudo-components on Phase Diagrams and Simulation Results, by Yau-Kun Li, Long X. Nghiem and Alan Siu, Vol. 24, No.6, P29-36, Nov.-Dec. 85.

M

Malcolm, J.D.—Simulation of a Large Steam-CO_2 Co-injection Experiment, by T. Stone and J.D. Malcolm, Vol. 24, No. 6, P51-59, Nov.-Dec. 85.

Management—Risk Analysis as a Project Tool, by B. Allardyce and G.M. Pottinger, Vol. 24, No. 2, P54-59, Mar.-Apr. 85.

—Futures: An Added Dimension to Trading Oil and Gas Stocks, by A. Clademenos, Vol. 24, No. 2, P60-62, Mar.-Apr. 85.

—Effective Human Resource Management Under Restraint, by A.R. Cahoon and J.I.A. Rowney, Vol. 24, No. 2, P63-65, Mar.-Apr. 85.

Mandybura, F.—Carbon Dioxide for Enhanced Oil Recovery in Canada, by S. McDonald, F. Mandybura and N. Sparks, Vol. 24, No. 1, P66-70, Jan.-Feb. 85.

Mass Transport—Simulation of a Large Steam-CO_2 Co-injection Experiment, by T. Stone and J.D. Malcolm, Vol. 24, No. 6, P51-59, Nov.-Dec. 85.

McDonald, S.—Carbon Dioxide for Enhanced Oil Recovery in Canada, by S. McDonald, F. Mandybura and N. Sparks, Vol. 24, No. 1, P66-70, Jan.-Feb. 85.

McPherson, R.G.—Recovery of Athabasca Bitumen with the Eletromagnetic Flood (EMF) Process, by R.G. McPherson, F.S. Chute and F.E. Vermeulen, Vol. 24, No. 1, P44-51, Jan.-Feb. 85.

Measurement-while-drilling System—Application of Measurement while Drilling in a Shallow, Highly Deviated Drilling Program, by C.Z. Johancsik, A.E. Leraand, B.G. Petovello, D.A. Gust and B.W. Smith, Vol. 24, No. 5, P37-42, Sept.-Oct. 85.

Miscible Displacement—Simulation of Enhanced Recovery Projects—the Problems and the Pitfalls of the Current Solutions, by A. Settari and B. Karcher, Vol. 24, No. 6, P22-28, Nov.-Dec. 85.

Miscible Flooding—Enhanced Oil Recovery Design for the Pembina Cardium Field, by J.J. O'Keefe, M.J. Boutette and B.J. Howes, Vol. 24, No. 1, P52-60, Jan.-Feb. 85.

—Carbon Dioxide for Enhanced Oil Recovery in Canada, by S. McDonald, F. Mandybura and N. Sparks, Vol. 24, No. 1, P66-70, Jan.-Feb. 85.

—Reservoir Model Studies for Miscible Flood Projects, by J. Flores, A. Siu and Yau-Kun Li, Vol. 24, No. 6, P37-50, Nov.-Dec. 85.

Miscible Solvent—Carbon Dioxide for Enhanced Oil Recovery in Canada, by S. McDonald, F. Mandybura and N. Sparks, Vol. 24, No. 1, P66-70, Jan.-Feb. 85.

Mobility Ratio—Reservoir Model Studies for Miscible Flood Projects, by J. Flores, A. Siu and Yau-Kun Li, Vol. 24, No. 5, P37-50, Nov.-Dec. 85.

Moore, R.G.—Effect of Relative Permeability on the Numerical Simulation of the Steam Stimulation Process, by D.W. Bennion, R.G. Moore and F.B. Thomas, Vol. 24, No. 2, P40-44, Mar.-Apr. 85.

—Kinetic Parameters for the High-Temperature Oxidation of In-Situ Combustion Coke, by F.B. Thomas, R.G. Moore and D.W. Bennion, Vol. 24, No. 6, P60-67, Nov.-Dec. 85.

Morrow, N.R.—Corrections to In-Situ Measurements of Residual Oil for Flushing at the Wellbore, by N.R. Morrow, I. Chatzis, D.

Siegel and J.J. Taber, Vol. 24, No. 4, P54-61, July-Aug. 85.
—Relative Permeabilities at Reduced Residual Saturations, by N.R. Morrow, I. Chatzis and H. Lim, Vol. 24, No. 4, P62-69, July-Aug. 85.

N

Natural Gas—FERC's Notice of Proposed Rule-making, by W. Fruehauf, Vol. 24, No. 6, P82-84, Nov.-Dec. 85.
Nelson, E.B.—Cementing Steamflood and Fireflood Wells—Slurry Design, by E.B. Nelson and L.H. Eilers, Vol. 24, No. 5, P58-63, Sept.-Oct. 85.
Newtonian Iterations—Fully Implicit Versus Dynamic Implicit Reservoir Simulation, by P.K.W. Vinsome, Vol. 24, No. 2, P49-53, Mar.-Apr. 85.
Nghiem, Long X.—Phase Behaviour Computations for Reservoir Fluids: Effect of Pseudo-components on Phase Diagrams and Simulation Results, by Yau-Kun Li, Long X. Nghiem and Alan Siu, Vol. 24, No. 6, P29-36, Nov.-Dec. 85.
Nitrogen—Application of Foam Cements in Alberta, by M.T. Olanson, Vol. 24, No. 5, P49-57, Sept.-Oct. 85.
Norman Wells—Artificial Island Construction in an Arctic River—the Norman Wells Production Islands, by J.S. Hunter and R.M. Tibbatts, Vol. 24, No. 5, P32-36, Sept.-Oct. 85.
Numerical Dispersion—Simulation of Enhanced Recovery Projects—the Problems and the Pitfalls of the Current Solutions, by A. Settari and B. Karcher, Vol. 24, No. 6, P22-28, Nov.-Dec. 85.
Numerical Modelling—Kinetic Parameters for the High-Temperature Oxidation of In-Situ Combustion Coke, by F.B. Thomas, R.G. Moore and D.W. Bennion, Vol. 24, No. 6, P60-67, Nov.-Dec. 85.
Numerical Simulation—Effect of Relative Permeability on the Numerical Simulation of the Steam Simulation Process, by D.W. Bennion, R.G. Moore and F.B. Thomas, Vol. 24, No. 2, P40-44, Mar.-Apr. 85.
—Problems in Numerical Simulation of Heavy Oil Reservoirs, by M.N. Esmail, Vol. 24, No. 3, P80-82, May-June 85.

O

Offshore Operation—Effective Well Testing is the Key to Planning of Major New Development Particularly in Remote Areas and Offshore Operations, by R.M. Pearson and D.M. Adams, Vol. 24, No. 4, P30-35, July-Aug. 85.
Offshore Technology—A Practical Drill-stem Testing Technique, Combining High Shop Density Underbalanced Perforating with Full Bore Test Tools, by J.B. Lukey, Vol. 24, No. 4, P36-43, July-Aug. 85.
—Technical and Economic Evaluation of Ship-shaped Floating Production and Storage Systems for the Canadian East Coast Offshore, by J.K. Peggs, K. Hutton and R. Rainey, Vol. 24, No. 5, P24-31, Sept.-Oct. 85.
—Aritificial Island Construction in an Arctic River—the Norman Wells Production Islands, by J.S. Hunter and R.M. Tibbatts, Vol. 24, No. 5, P32-36, Sept.-Oct. 85.
Oil—Phase Behaviour Computations for Reservoir Fluids: Effect of Pseudo-components on Phase Diagrams and Simulation Results by Yau-Kau Li, Long X. Nghiem and Alan Siu, Vol. 24, No. 6, P29-36, Nov.-Dec. 85.
Oil Displacement—Relative Permeabilities at Reduced Residual Saturations, by N.R. Morrow, I. Chatzis and H. Lim, Vol. 24, No. 4, P62-69, July-Aug. 85.
Oil Flooding—Effect of Relative Permeability on the Numerical Simulation of the Steam Stimulation Process, by D.W. Bennion, R.G. Moore and F.B. Thomas, Vol. 24, No. 2, P40-44, Mar.-Apr. 85.
Oil Sands—A New Approach to the Modelling of Steam-Assisted Gravity Drainage, by R.M. Butler, Vol. 24, No. 3, P42-51, May-June 85.
—In-Situ Recovery from the Athabasca Oil Sands—Past Experience and Future Potential, by D.A. Redford, Vol. 24, No. 3, P52-62, May-June 85.
—A Technique for the Measurement of Dynamic Mechanical Properties of Oil Sands, by T.R. Hsu, G.G. Chen and Z.L. Gong, Vol. 24, No. 3, P63-68, May-June 85.
—Simulation of a Large Steam-CO_2 Co-injection Experiment, by T. Stone and J.D. Malcolm, Vol. 24, No. 6, P51-59, Nov.-Dec. 85.
Oil Saturation—Effect of Relative Permeability on the Numerical Simulation of the Steam Stimulation Process, by D.W. Bennion, R.G. Moore and F.B. Thomas, Vol. 24, No. 2, P40-44, Mar.-Apr. 85.
—Production Evaluation of the Viking Kinsella B Pool Unit No. 1, by J.J. Edgson and G. Czyzewski, Vol. 24, No. 4, P70-76, July-Aug. 85.
Oil Stocks—Futures: An Added Dimension to Trading Oil and Gas Stocks, by A. Clademenos, Vol. 24, No. 2, P60-62, Mar.-Apr. 85.
O'Keefe, J.J.—Enhanced Oil Recovery Design for the Pembina Cardium Field, by J.J. O'Keefe, M.J. Boutette and B.J. Howes, Vol. 24, No. 1, P52-60, Jan.-Feb. 85.
Olanson, M.T.—Application of Foam Cement in Alberta, by M.T. Olanson, Vol. 24, No. 5, P49-57, Sept.-Oct. 85.
Oxidation—Kinetic Parameters for the High-Temperature Oxidation of In-Situ Combustion Coke, by F.B. Thomas, R.G. Moore and D.W. Bennion, Vol. 24, No. 6, P60-67, Nov.-Dec. 85.

P

Parameter Models—Simulation of Enhanced Recovery Projects—the Problems and the Pitfalls of the Current Solutions, by A. Settari and B. Karcher, Vol. 24, No. 6, P22-28, Nov.-Dec. 85.
Pearson, R.M.—Effective Well Testing is the Key to Planning of Major New Developments Particularly in Remote Areas and Offshore Operations, by R.M. Pearson and D.M. Adams, Vol. 24, No. 4, P30-35, July-Aug. 85.
Peggs, J.K.—Technical and Economic Evaluation of Ship-shaped Floating Production and Storage Systems for the Canadian East Coast Offshore, by J.K. Peggs, K. Hutton and R. Rainey, Vol. 24, No. 5, P24-31, Sept.-Oct. 85.
Pembina Cardium Field—Enhanced Oil Recovery Design for the Pembina Cardium Field, by J.J. O'Keefe, M.J. Boutette and B.J. Howes, Vol. 24, No. 1, P52-60, Jan.-Feb. 85.
—A First-look Method for Analyzing Mature Waterfloods, by R. Krasey, Vol. 24, No. 6, P68-76, Nov.-Dec. 85.
Permeability—Thermal Extraction Chromatography—a New Technique for Rapid Wellbore Evaluation, by J.G.W. Price, Vol. 24, No. 5, P64-69, Sept.-Oct. 85.
Permeability Heterogeneities—Reservoir Model Studies for Miscible Flood Projects, by J. Flores, A. Siu and Yau-Kun Li, Vol. 24, No. 6, P37-50, Nov.-Dec. 85.
Petovello, B.G.—Application of Measurement while Drilling in a Shallow, Highly Deviated Drilling Program, by C.Z. Johancsik, A.E. Leraand, B.G. Petovello, D.A. Gust and B.W. Smith, Vol. 24, No. 5, P37-42, Sept.-Oct. 85.
Phase Diagrams—Phase Behaviour Computations for Reservoir Fluids: Effect of Pseudo-components on Phase Diagrams and Simulation Results, by Yau-Kun Li, Long X. Nghiem and Alan Siu, Vol. 24, No. 6, P29-36, Nov.-Dec. 85.
Physical Simulator—Simulation of a Large Steam-CO_2 Co-injection Experiment, by T. Stone and J.D. Malcolm, Vol. 24, No. 6, P51-59, Nov.-Dec. 85.
Pilot Project—Risk Analysis as a Project Tool, by B. Allardyce and G.M. Pottinger, Vol. 24, No. 2, P54-59, Mar.-Apr. 85.
Porosity—Thermal Extraction Chromatography—a New Technique for Rapid Wellbore Evaluation, by J.G.W. Price, Vol. 24, No. 5, P64-69, Sept.-Oct. 85.
Portland Cement—Cementing Steamflood and Fireflood Wells—Slurry Design, by E.B. Nelson and L.H. Eilers, Vol. 24, No. 5, P58-63, Sept.-Oct. 85.
Pottinger, G.M.—Risk Analysis as a Project Tool, by B. Allardyce and G.M. Pottinger, Vol. 24, No. 2, P54-59, Mar.-Apr. 85.
Production—Carbon Dioxide/Aqueous Mixtures as Fracturing Fluids in Western Canada, by A.G. Leinan and P.C. Harris, Vol. 24, No. 2, P45-48, Mar.-Apr. 85.
—A New Approach to the Modelling of Steam-Assisted Gravity Drainage, by R.M. Butler, Vol. 24, No. 3, P42-51, May -June 85.
—A Laboratory Investigation into the In-Situ Recovery of Bitumen from an Oil Sand Formation using Hot Water and Naphtha, by P. Harris, P. Toma and D. Livesey, Vol. 24, No. 3, P69-74, May -June 85.
—Effective Well Testing is the Key to Planning of Major New Developments Particularly in Remote Areas and Offshore Operations, by R.M. Pearson and D.M. Adams, Vol. 24, No. 4, P30-35, July-Aug. 85.
—Analysis of Production-Performance Graphs, by R.A. Purvis, Vol. 24, No. 4, P44-53, July-Aug. 85.
—Corrections to In-Situ Measurements of Residual Oil for Flushing

at the Wellbore, by N.R. Morrow, I. Chatzis, D. Siegel and J.J. Taber, Vol. 24, No. 4, P54-61, July-Aug. 85.
—Relative Permeabilities at Reduced Residual Saturations, by N.R. Morrow, I. Chatzis and H. Lim, Vol. 24, No. 4, P62-69, July-Aug. 85.
—Production Evaluation of the Viking Kinsella B Pool Unit No. 1, by J.J. Edgson and G. Czyzewski, Vol. 24, No. 4, P70-76, July-Aug. 85.
—Casing Running Considerations in Highly Deviated Wellbores, by R.O. Jordan, Vol. 24, No. 5, P43-48, Sept.-Oct. 85.

Production-Performance Graphs—Analysis of Production-Performance Graphs, by R.A. Purvis, Vol. 24, No. 4, P44-53, July-Aug. 85.

Pseudo-components—Phase Behaviour Computations for Reservoir Fluids: Effect of Pseudo-components on Phase Diagrams and Simulation Results, by Yau-Kun Li, Long X. Nghiem and Alan Siu, Vol. 24, No. 6, P29-36, Nov.-Dec. 85.

Purvis, R.A.—Analysis of Production-Performance Graphs, by R.A. Purvis, Vol. 24, No. 4, P44-53, July-Aug. 85.

Q

Qualitative Method—A First-look Method for Analyzing Mature Waterfloods, by R. Krasey, Vol. 24, No. 6, P68-76, Nov.-Dec. 85.

R

Rainey, R.—Technical and Economic Evaluation of Ship-shaped Floating Production and Storage Systems for the Canadian East Coast Offshore, by J.K. Peggs, K. Hutton and R. Rainey, Vol. 24, No. 5, P24-31, Sept.-Oct. 85.

Redford, D.A.—In-Situ Recovery from the Athabasca Oil Sands—Past Experience and Future Potential, by D.A. Redford, Vol. 24, No. 3, P52-62, May-June 85.

Relative Permeability—Effect of Relative Permeability on the Numerical Simulation of the Steam Stimulation Process, by D.W. Bennion, R.G. Moore and F.B. Thomas, Vol. 24, No. 2, P40-44, Mar.-Apr. 85.
—Relative Permeabilities at Reduced Residual Saturations, by N.R. Morrow, I. Chatzis and H. Lim, Vol. 24, No. 4, P62-69, July-Aug. 85.

Reservoir Engineering—Effect of Relative Permeability on the Numerical Simulation of the Steam Stimulation Process, by D.W. Bennion, R.G. Moore and F.B. Thomas, Vol. 24, No. 2, P40-44, Mar.-Apr. 85.
—Fully Implicit Versus Dynamic Implicit Reservoir Simulation, by P.K.W. Vinsome, Vol. 24, No. 2, P49-53, Mar.-Apr. 85.
—A Practical Drill-stem Testing Technique, Combining High Shop Density Underbalanced Perforating with Full Bore Test Tools, by J.B. Lukey, Vol. 24, No. 4, P36-43, July-Aug. 85.
—Corrections to In-Situ Measurements of Residual Oil for Flushing at the Wellbore, by N.R. Morrow, I. Chatzis, D. Siegel and J.J. Taber, Vol. 24, No. 4, P54-61, July-Aug. 85.
—Relative Permeabilities at Reduced Residual Saturations, by N.R. Morrow, I. Chatzis and H. Lim, Vol. 24, No. 4, P62-69, July-Aug. 85.

Reservoir Simulation—Tertiary Recovery Potential of CO_2 Flooding in Joffre Viking Pool, Alberta, by S.C.M. Ko, P.M. Stanton and D.J. Stephenson, Vol. 24, No. 1, P36-43, Jan.-Feb. 85.
—Enhanced Oil Recovery Design for the Pembina Cardium Field, by J.J. O'keefe, M.J. Boutette and B.J. Howes, Vol. 24, No. 1, P52-60, Jan.-Feb. 85.
—Fully Implicit Versus Dynamic Implicit Reservoir Simulation, by P.K.W. Vinsome, Vol. 24, No. 2, P49-53, Mar.-Apr. 85.
—Problems in Numerical Simulation of Heavy Oil Reservoirs, by M.N. Esmail, Vol. 24, No. 3, P80-82, May-June 85.
—Reservoir Model Studies for Miscible Flood Projects, by J. Flores, A. Siu and Yau-Kun Li, Vol. 24, No. 6, P37-50, Nov.-Dec. 85.

Reservoir Testing—Technical and Economic Evaluation of Ship-shaped Floating Production and Storage Systems for the Canadian East Coast Offshore, by J.K. Peggs, K. Hutton and R. Rainey, Vol. 24, No. 5, P24-31, Sept.-Oct. 85.

Reservoirs—A New Approach to the Modelling of Steam-assisted Gravity Drainage, by R.M. Butler, Vol. 24, No. 3, P42-51, May-June 85.
—Analysis of Production-Performance Graphs, by R.A. Purvis, Vol. 24, No. 4, P44-53, July-Aug. 85.

Residual Oils—Corrections to In-Situ Measurements of Residual Oil for Flushing at the Wellbore, by N.R. Morrow, I. Chatzis, D. Siegel and J.J. Taber, Vol. 24, No. 4, P54-61, July-Aug. 85.

Residual Oil Saturation—Relative Permeabilities at Reduced Residual Saturations, by N.R. Morrow, I. Chatzis and H. Lim, Vol. 24, No. 4, P62-69, July-Aug. 85.

Retlaw Upper Mannville 'V' Pool—Retlaw Upper Mannville 'V' Pool Unit Experimental Carbon Dioxide Flood, by W.E. Kerr, Vol. 24, No. 1, P64-65, Jan.-Feb. 85.

Risk Analysis—Risk Analysis as a Project Tool, by B. Allardyce and G.M. Pottinger, Vol. 24, No. 2, P54-59, Mar.-Apr. 85.

Rowney, J.I.A.—Effective Human Resources Management Under Restraint, by A.R. Cahoon and J.I.A. Rowney, Vol. 24, No. 2, P63-65, Mar.-Apr. 85.

S

Saturation—Fully Implicit Versus Dynamic Implicit Reservoir Simulation, by P.K.W. Vinsome, Vol. 24, No. 2, P49-53, Mar.-Apr. 85.
—Corrections to In-Situ Measurements of Residual Oil for Flushing at the Wellbore, by N.R. Morrow, I. Chatzis and D. Siegel and J.J. Taber, Vol. 24, No. 4, P54-61, July-Aug. 85.

Screening Method—A First-look Method for Analyzing Mature Waterfloods, by R. Krasey, Vol. 24, No. 6, P68-76, Nov.-Dec. 85.

Secondary Recovery—Reservoir Model Studies for Miscible Flood Projects, by J. Flores, A. Siu and Yau-Kun Li, Vol. 24, No. 6, P37-50, Nov.-Dec. 85.

Settari, A.—Simulation of Enhanced Recovery Projects—the Problems and the Pitfalls of the Current Solutions, by A. Settari and B. Karcher, Vol. 24, No. 6, P22-28, Nov.-Dec. 85.

Sharp, K.C.—Enhanced Oil Recovery: Retrospect and Prospect, by G.C. Watkins and K. Chant Sharp, Vol. 24, No. 1, P61-63, Jan.-Feb. 85.

Siegel, D.—Corrections to In-Situ Measurements of Residual Oil for Flushing at the Wellbore, by N.R. Morrow, I. Chatzis, D. Siegel and J.J. Taber, Vol. 24, No. 4, P54-61, July-Aug. 85.

Single Point Mooring System—Technical and Economical Evaluation of Ship-shaped Floating Production and Storage Systems for the Canadian East Coast Offshore, by J.K. Pegg, K. Hutton and R. Rainey, Vol. 24, No. 5, P24-31, Sept.-Oct. 85.

Siu, Alan—Phase Behaviour Computations for Reservoir Fluids: Effect of Pseudo-components on Phase Diagrams and Simulation Results, by Yau-Kun Li, Long X. Nghiem and Alan Siu, Vol. 24, No. 6, P29-36, Nov.-Dec. 85.
—Reservoir Model Studies for Miscible Flood Projects, by J. Flores, A. Siu and Yau-Kun Li, Vol. 24, No. 6, P37-50, Nov.-Dec. 85.

Slurry Density—Application of Foam Cements in Alberta, by M.T. Olanson Vol. 24, No. 5, P49-57, Sept.-Oct. 85.

Slurry Design—Application of Foam Cements in Alberta, by M.T. Olanson, Vol. 24, No. 5, P49-57, Sept.-Oct. 85.
—Cementing Steamflood and Fireflood Wells—Slurry Design, by E.B. Nelson and L.H. Eilers, Vol. 24, No. 5, P58-63, Sept.-Oct. 85.

Smith, B.W.—Application of Measurement while Drilling in a Shallow, Highly Deviated Drilling Program, by C.Z. Johancsik, A.E. Leraand, B.G. Petovello, D.A. Gust and B.W. Smith, Vol. 24, No. 5, P27-42, Sept.-Oct. 85.

Solvent Injection—Simulation of Enhanced Recovery Projects — the Problems and the Pitfalls of the Current Solutions, by A. Settari and B. Karcher, Vol. 24, No. 6, P22-28, Nov.-Dec. 85.
—Reservoir Model Studies for Miscible Flood Projects, by J. Flores, A. Siu and Yau-Kun Li, Vol. 24, No. 6, P37-50, Nov.-Dec. 85.

Sour Gas—Effective Well Testing is the Key to Planning of Major New Developments Particularly in Remote Areas and Offshore Operations, by R.M. Pearson and D.M. Adams, Vol. 24, No. 4, P30-35, July-Aug. 85.

Sparks, M.—Carbon Dioxide for Enhanced Oil Recovery in Canada, by S. McDonald, F. Mandybura and N. Sparks, Vol. 24, No. 1, P66-70, Jan.-Feb. 85.

Split Hopkinson Bar System—A Technique for the Measurement of Dynamic Mechanical Properties of Oil Sands, by T.R. Hsu, G.G. Chen and Z.L. Gong, Vol. 24, No. 3, P63-68, May-June 85.

Stanton, P.M.—Tertiary Recovery Potential of CO_2 Flooding in Joffre Viking Pool, Alberta, by S.C.M. Ko, P.M. Stanton and D.J. Stephenson, Vol. 24, No. 1, P36-43, Jan.-Feb. 85.

Steam-CO_2 Co-injection—Simulation of a Large Steam-CO_2 Co-injection Experiment, by T. Stone and J.D. Malcolm, Vol. 24, No. 6, P51-59, Nov.-Dec. 85.

Steam Chamber—A New Approach to the Modelling of Steam-assisted Gravity Drainage, by R.M. Butler, Vol. 24, No. 3, P42-51, May-June 85.

Steam Drag—In-Situ Recovery from the Athabasca Oil Sands—Past

Experience and Future Potential, by D.A. Redford, Vol. 24, No. 3, P52-62, May -June 85.

Steam Injection—In-Situ Recovery from the Athabasca Oil Sands —Past Experience and Future Potential, by D.A. Redford, Vol. 24, No. 3, P52-62, May -June 85.

Steam Stimulation—Effect of Relative Permeability on the Numerical Simulation of the Steam Stimulation Process, by D.W. Bennion, R.G. Moore and F.B. Thomas, Vol. 24, No. 2, P40-44, Mar.-Apr. 85.

—A New Approach to the Modelling of Steam-assisted Gravity Drainage, by R.M. Butler, Vol. 24, No. 3, P42-51, May -June 85.

—In-Situ Recovery from the Athabasca Oil Sands—Past Experience and Future Potential, by D.A. Redford, Vol. 24, No. 3, P52-62, May -June 85.

Steamflooding—Materials Performance in Thermal Enhanced Oil Recovery Environments, by R. Zawierucha and C.J. Henningson, Vol. 24, No. 3, P75-79, May -June 85.

—Cementing Steamflood and Fireflood Wells—Slurry Design, by E.B. Nelson and L.H. Eilers, Vol. 24, No. 5, P58-63, Sept.-Oct. 85.

Stephenson, D.J.—Tertiary Recovery Potential of CO_2 Flooding in Joffre Viking Pool, Alberta, by S.C.M. Ko, P.M. Stanton and D.J. Stephenson, Vol. 24, No. 1, P36-43, Jan.-Feb. 85.

Stone, T.—Simulation of a Large Steam-CO_2 Co-injection Experiment, by T. Stone and J.D. Malcolm, Vol. 24, No. 6, P51-59, Nov.-Dec. 85.

Surveys—Application of Measurement while Drilling in a Shallow, Highly Deviated Drilling Program, by C.Z. Johancsik, A.E. Leraand, B.G. Petovello, D.A. Gust and B.W. Smith, Vol. 24, No. 5, P37-42, Sept.-Oct. 85.

T

Taber, J.J.—Corrections to In-Situ Measurements of Residual Oil for Flushing at the Wellbore, by N.R. Morrow, I. Chatzis, D. Siegel and J.J. Taber, Vol. 24, No. 4, P54-61, July-Aug. 85.

Teritary Recovery—Tertiary Recovery Potential of CO_2 Flooding in Joffre Viking Pool, Alberta, by S.C.M. Ko, P.M. Stanton and D.J. Stephenson, Vol. 24, No. 1, P36-43, Jan.-Feb. 85.

—Reservoir Model Studies for Miscible Flood Projects, by J. Flores, A. Siu and Yau-Kun Li, Vol. 24, No. 6, P37-50, Nov.-Dec. 85.

Thermal Conductivity—Simulation of a Large Steam-CO_2 Co-injection-Experiment, by T. Stone and J.D. Malcolm, Vol. 24, No. 6, P51-59, Nov.-Dec. 85.

Thermal Cracking—Kinetic Parameters for the High-Temperature Oxidation of In-Situ Combustion Coke, by F.B. Thomas, R.G. Moore and D.W. Bennion, Vol. 24, No. 6, P60-67, Nov.-Dec. 85.

Thermal Efficiency—A New Approach to the Modelling of Steam-assisted Gravity Drainage, by R.M. Butler, Vol. 24, No. 3, P42-51, May -June 85.

—A Laboratory Investigation into the In-Situ Recovery of Bitumen from an Oil Sand Formation using Hot Water and Naphtha, by P. Harris, P. Toma and D. Livesey, Vol. 24, No. 3, P69-74, May -June 85.

Thermal Energy—Recovery of Athabasca Bitumen with the Electro-magnetic Flood (EMF) Process, by R.G. McPherson, F.S. Chute and F.E. Vermeulen, Vol. 24, No. 1, P44-51, Jan.-Feb. 85.

Thermal Extraction—Thermal Extraction Chromatography—A New Technique for Rapid Wellbore Evaluation, by J.G.W. Price, Vol. 24, No. 5, P64-79, Sept.-Oct. 85.

Thermal Numerical Simulations—Effect of Relative Permeability on the Numerical Simulation of the Steam Stimulation Process, by D.W. Bennion, R.G. Moore and F.B. Thomas, Vol. 24, No. 2, P40-44, Mar.-Apr. 85.

Thermal Recovery—Materials Performance in Thermal Enhanced Oil Recovery Environments, by R. Zawierucha and C.J. Henningson, Vol. 24, No. 3, P75-79, May-June 85.

—Kinetic Parameters for the High-Temperature Oxidation of In-Situ Combustion Coke, by F.B. Thomas, R.G. Moore and D.W. Bennion, Vol. 24, No. 6, P60-67, Nov.-Dec. 85.

Thomas, F.B.—Effect of Relative Permeability on the Numerical Simulation of the Steam Stimulation Process, by D.W. Bennion, R.G. Moore and F.B. Thomas, Vol. 24, No. 2, P40-44, Mar.-Apr. 85.

—Kinetic Parameters for the High-Temperature Oxidation of In-Situ Combustion Coke, by F.B. Thomas, R.G. Moore and D.W. Bennion, Vol. 24, No. 6, P60-67, Nov.-Dec. 85.

Tibbats, R.M.—Artificial Island Construction in an Arctic River—the Norman Wells Production Islands, by J.S. Hunter and R.M. Tibbatts, Vol. 24, No. 5, P32-36, Sept.-Oct. 85.

Toma, P.—A Laboratory Investigation into the In-Situ Recovery of Bitumen from an Oil Sand Formation using Hot Water and Naphtha, by P. Harris, P. Toma and D. Livesey, Vol. 24, No. 3, P69-74, May-June 85.

Tool Design—Application of Measurement while Drilling in a Shallow, Highly Deviated Drilling Program, by C.Z. Johancsik, A.E. Leraand, B.G. Petovello, D.A. Gust and B.W. Smith, Vol. 24, No. 5, P37-42, Sept.-Oct. 85.

True Boiling Point—Phase Behaviour Computations for Reservoir Fluids: Effect of Pseudo-components on Phase Diagrams and Simulations Results, by Yau-Kun Li, Long X. Nghiem and Alan Siu, Vol. 24, No. 6, P29-36, Nov.-Dec. 85.

Tubular Differential Reactor—In-Situ Recovery from the Athabasca Oil Sands—Past Experience and Future Potential, by D.A. Redford, Vol. 24, No. 3, P52-62, May -June 85.

V

Vermeulen, F.E.—Recovery of Athabasca Bitumen with the Electro-magnetic Flood (EMF) Process, by R.G. McPherson, F.S. Chute and F.E. Vermeulen, Vol. 24, No. 1, P44-51, Jan.-Feb. 85.

Vertical Sweep Efficiency—A First-look Method for Analyzing Mature Waterfloods, by R. Krasey, Vol. 24, No. 6, P68-76, Nov.-Dec. 85.

Vinsome, P.K.W.—Fully Implicit Versus Dynamic Implicit Reservoir Simulation, by P.K.W. Vinsome, Vol. 24, No. 2, P49-53, Mar.-Apr. 85.

Viscose Fingering—Simulation of Enhanced Recovery Projects—the Problems and the Pitfalls of the Current Solutions, by A. Settari and B. Karcher, Vol. 24, No. 6, P22-28, Nov.-Dec. 85.

Viscosity—Carbon Dioxide/Aqueous Mixtures as Fracturing Fluids in Western Canada, by A.G. Leinan and P.C. Harris, Vol. 24, No. 2, P45-48, Mar.-Apr. 85.

Viscosity Reduction—Simulation of a Large Steam-CO_2 Co-injection Experiment, by T. Stone and J.D. Malcolm, Vol. 24, No. 6, P51-59, Nov.-Dec. 85.

W

Water-Alternating Solvent—Reservoir Model Studies for Miscible Flood Projects, by J. Flores, A. Siu and Yau-Kun Li, Vol. 24, No. 6, P37-50, Nov.-Dec. 85.

Waterflooding—Tertiary Recovery Potential of CO_2 Flooding in Joffre Viking Pool, Alberta, by S.C.M. Ko, P.M. Stanton and D.J. Stephenson, Vol. 24, No. 1, P36-43, Jan.-Feb. 85.

—Enhanced Oil Recovery Design for the Pembina Cardium Field by J.J. O'Keefe, M.J. Boutette and B.J. Howes, Vol. 24, No. 1, P52-60, Jan.-Feb. 85.

—Effect of Relative Permeability on the Numerical Simulation of the Steam Stimulation Process, by D.W. Bennion, R.G. Moore and F.B. Thomas, Vol. 24, No. 2, P40-44, Mar.-Apr. 85.

—Correction to In-Situ Measurements of Residual Oil and Flushing at the Wellbore, by N.R. Morrow, I. Chatzis, D. Siegel and J.J. Taber, Vol. 24, No. 4, P54-61, July-Aug. 85.

—Relative Permeabilities at Reduced Residual Saturations, by N.R. Morrow, I. Chatzis, and H. Lim, Vol. 24, No. 4, P62-69, July-Aug. 85.

—Production Evaluation of the Viking Kinsella B Pool Unit No. 1, by J.J. Edgson and G. Czyzewski, Vol. 24, No. 4, P70-76, July-Aug. 85.

—A First-look Method for Analyzing Mature Waterfloods, by R. Krasey, Vol. 24, No. 6, P68-76, Nov.-Dec. 85.

Water Quality—Materials Performance in Thermal Enhanced Oil Recovery Environments, by R. Zawierucha and C.J. Henningson, Vol. 24, No. 3, P75-79, May-June 85.

Water Saturation—Effect of Relative Permeability on the Numerical Simulation of the Steam Stimulation Process, by D.W. Bennion, R.G. Moore and F.B. Thomas, Vol. 24, No. 2, P40-44, Mar.-Apr. 85.

Watkins, G.C.—Enhanced Oil Recovery: Retrospect and Prospect, by G.C. Watkins and K. Chant Sharp, Vol. 24, No. 1, P61-63, Jan.-Feb. 85.

Welch, R.V.—Helium — What about it? by R.V. Welch, Vol. 24, No. 5, P69-70, Sept.-Oct. 85.

Wellbore Evaluation—Thermal Extraction Chromatography—A New Technique for Rapid Wellbore Evaluation, by J.G.W. Price, Vol. 24, No. 5, P64-69, Sept.-Oct. 85.

Wellbores—Casing Running Considerations in Highly Deviated Wellbores, by R.O. Jordan, Vol. 24, No. 5, P43-48, Sept.-Oct. 85.

Well Operations—Effective Well Testing is the Key to Planning of Major New Development Particularly in Remote Areas and Offshore Operations, by R.M. Pearson and D.M. Adams, Vol. 24, No. 4, P30-35, July-Aug. 85.
—A Practical Drill-stem Testing Technique, Combining High Shop Density Underbalanced Perforating with Full Bore Test Tools, by J.B. Lukey, Vol. 24, No. 4, P36-43, July-Aug. 85.
—Analysis of Production-Performance Graphs, by R.A. Purvis, Vol. 24, No. 4, P44-53, July-Aug. 85.
—Corrections to in In-Situ Recovery Measurements of Residual Oil for Flushing at the Wellbore, by N.R. Morrow, I. Chatzis, D. Siegel and J.J. Taber, Vol. 24, No. 4, P54-61, July-Aug. 85.
—Relative Permeabilities at Reduced Residual Saturations, by N.R. Morrow, I. Chatzis, H. Lim, Vol. 24, No. 4, P62-69, July-Aug. 85.
—Production Evaluation of the Viking Kinsella B Pool Unit No. 1, by J.J. Edgson and G. Czyzewski, Vol. 24, No. 4, P70-76, July-Aug. 85.
Well Productivity—Technical and Economic Evaluation of Ship-shaped Floating Production and Storage Systems for the Canadian East Coast Offshore, by J.K. Peggs, K. Hutton and R. Rainey, Vol. 24, No. 5, P24-31, Sept.-Oct. 85.
Well Spacing—Enhanced Oil Recovery Design for the Pembina Cardium Field, by J.J. O'Keefe, M.J. Boutette and B.J. Howes, Vol. 24, No. 1, P52-60, Jan.-Feb. 85.
Well Stimulation—Carbon Dioxide/Aqueous Mixtures as Fracturing Fluids in Western Canada, by A.G. Leinan and P.C. Harris, Vol. 24, No. 2, P45-48, Mar.-Apr. 85.
Well Testing—Effective Well Testing is the Key to Planning of Major New Developments Particularly in Remote Areas and Offshore Operations, by R.M. Pearson and D.M. Adams, Vol. 24, No. 4, P30-35, July-Aug. 85.

Y

Young's Modulus—A Technique for the Measurement of Dynamic Mechanical Properties of Oil Sands, by T.R. Hsu, G.G. Chen and Z.L. Gong, Vol. 24, No. 2, P63-68, May.-June 85.

Z

Zawierucha, R.—Materials Performance in Thermal Enhanced Oil Recovery Environments, by R. Zawierucha and C.J. Henningson, Vol. 24, No. 3, P75-79, May-June 85.

(continued from p. 25)

more detailed characterization of purer maceral concentrates.

MATHEMATICS FOR SEISMIC DATA PROCESSING AND INTERPRETATION — by A.R. Camina and G.J. Janacek; published by International Human Resources Development Corporation, 137 Newbury Street, Boston, MA, 02116; 273 pages, illustrated, appendices, index, cloth. Price: $44 (U.S.). ISBN 0-934634-99-8.

In this book, the mathematical foundations for understanding signal processing in seismic analysis are presented. It is not meant to be a mathematics text book in the traditional sense but rather a mathematics text to give the reader an understanding of the concepts involved. The object is not to turn the reader into a mathematician but rather to enable him or her to be mathematically literate.

The chapters of the book could be divided into three sections, the first three chapters making up the first section. In this section, most of the material is essentially "A-level material" (in the English context) or first calculus course (in the American context). There are various sections especially relevant to geophysics. It could be said that most of this is essential to the understanding of continuous processes.

The last three chapters are the meat of the book. In one sense, the justification of the first six chapters is to enable the reader to understand these last three chapters. One could almost say that this is presented as a precursor to the work of Enders Robinson.

Throughout the main text, the reader will occasionally find a "P" in the margin. This means that there is a program (written in BASIC) which is relevant to the material in the text at that point. Their purpose is to enable the reader to use them on most micros and to get some feeling for the mathematics involved.

VERTICAL SEISMIC PROFILING: TECHNIQUE, APPLICATIONS AND CASE HISTORIES — edited by A.H. Balch and M.W. Lee; published by International Human Resources Development Corporation, 137 Newbury Street, Boston, MA, 02116; 502 pages, photos, illustrated, references, index, cloth. Price: $58 (U.S.). ISBN 0-934634-47-5.

A technique is defined as a systematic procedure by which a complete scientific task is accomplished. A successful vertical seismic profiling (VSP) investigation requires a rather high degree of both technique and skill. In this book, the authors describe the VSP technique in detail so that newcomers to the field will be able to apply it to their own problems as quickly as possible. Unfortunately, the other requisite, skill, can only be attained by actual experience in obtaining and using VSPs.

The most convincing argument for continued and expanded use of vertical seismic profiles is that the method really works; it can be used to solve a wide variety of geologic problems. The applications and case histories are designed to convince even the most skeptical earth scientist of the usefulness and wide variety of applications of the VSP method. Most of the case histories and examples have direct applications to similar problems elsewhere. The results of the Leo Sand case history, for instance, are directly applicable to many problems in the detection and delineation of productive sand lenses.

The element that distinguishes vertical seismic profiling from other seismic methods is that VSP involves deep boreholes. Either the seismic source, the detector, or both source and detector are located at a great multiplicity of levels within the boreholes. The authors have therefore included the method of torpedoing (shooting from the hole to the surface) and cross-borehole shooting in the area of vertical seismic profiling. This basic idea — recording or initiating the seismic wave field at many levels in a deep borehole — is not new.

Within the last six or seven years, interest in and use of vertical seismic profiles has had an explosive growth. The number of VSPs obtained per year has grown by at least a hundredfold. This is probably due to several factors, including the increase in the price of petroleum, the ease with which VSP data can now be digitally recorded and processed, and a gradual realization in the petroleum exploration community that VSP data can be of great value in addressing a variety of seismic exploration and production problems.

The literature on most seismic exploration subjects is widely scattered throughout many journals and texts, written in several languages. The VSP literature is no exception. Over a period of time, the authors have developed an extensive bibliography of VSP. Most of this bibliography is contained in the final section of the book. The bibliography will be of interest and value to those who wish to pursue the subject.

The authors assume that the reader has some acquaintance with the rudiments of the reflection seismic method: data acquisition, processing, and interpretation. Detailed knowledge of these areas will make the material more meaningful, but is not essential to an understanding of the basic ideas presented. In Chapter 5, Borehole Seismology, some wave propagation background is necessary to appreciate the details. But readers unfamiliar with the wave propagation theory should easily understand the results obtained and shown in graphical form.